

# Examining Activities Concerning the Use of Words Encountered in Content Area Courses in Writing by Children with Hearing Loss

H. Pelin Karasu

Department of Special Education, Program in Education of the Hearing Impaired, Anadolu University, Turkey

## Abstract

Improvement of vocabulary constitutes an important part of the literacy practices. Children with hearing loss experience difficulties in using newly encountered words in verbal and written languages due to the delay they experience in linguistic skills. The objective of the present study is to investigate the course of applying a balanced literacy program, that allows the words encountered by the children with hearing loss during informative lessons, to be used in their written expressions. The study has been designed as case study. The participants of the study consisted of 6 students with hearing loss educating at the 4th class of elementary school, a class teacher, and the researcher. The data source of the study included the field observations, records of the validity meetings, lesson program, and the materials obtained during the course of practice; additionally the diary of the researcher was reported, and the students' yields and the audiological documents were investigated. The study results have been discussed in light of the activities which improve vocabulary by using picture, by using text and by using words, sentences, and the techniques used during these activities.

**Keywords:** child with hearing loss, vocabulary, writing skills, balanced literacy, literacy activities

## 1. Introduction

There is a strong and direct correlation between the literacy skills and vocabulary (Paul, 2001; Schirmer, 2000; Tompkins, 2014). An important part of the improvement in vocabulary ensues with the reading experiences; extrapolation of the things read and the skills of written expression also improve as the vocabulary improves. One of the reasons why the children with hearing loss experience difficulty in improving literacy skills is the limited vocabulary they possess (e.g., Kelly, 1996; Luckner, Sebal, Cooney, Young III and Muir, 2005/2006; Luckner and Cooke, 2010; Paul and Gustafson, 1991; Schirmer, 2000; Williams, 2011). Problems related to improvement of vocabulary such as difficulty in comprehending the meanings of new words and inability to use these words in different contexts also affect the literacy skills of children with hearing loss, as it is the case in children showing normal development. Because of impaired hearing, there is a delay in the development of linguistic skills in the children with hearing loss, compared to hearing children of the same age (Colin, Mangan, Ecalle and Leybaert, 2007; Geers, 2003; Kyle and Haris, 2006; 2010; Mayer, 2007; Schirmer and McGough, 2005; Spencer, Barker and Tomblin, 2003). Nevertheless, studies conducted with the children with hearing loss reveal that these children better comprehend the meaning relationships among words rather than the definitions of these words, and they do not experience more distinct difficulties than the hearing children do while learning words (Schirmer, 2000).

Children can also learn many words in their natural environments and within their daily lives; however along with these conditions alone, it's impossible for them to learn new words related to various subjects and contexts (Tompkins, 2014). The spontaneous improvement of vocabulary without performing any educational practice is not sufficient for the students experiencing difficulty in improving their literacy skills (Gunning, 2003; Vacca, R., Vacca, J. A., Gove, Burkey, Lenhart, McKeon, 2003). Therefore it has to be ensured that these words are being used effectively during the activities of teaching reading, reading comprehension, writing and content-area knowledges (Akay, 2011; Luckner and Cooke, 2010; Tompkins, 2014).

In teaching literacy skills, three approaches predominate in terms of educational practices and principles which emphasize listening, speaking, reading and writing skills in combination. These are the language experience, whole language and balanced literacy approaches (Cramer, 2004). The balanced literacy is an eclectic approach that adapts the best practices and principles of various approaches, especially those of the whole language practices (Cramer, 2004; Harp and Brewer, 2005). The whole language curriculum is based on developing training media that meets the child's needs for learning in combination with training program and the child's literacy skills. During the application of whole language program, the listening, speaking, reading and writing skills are treated as a whole, and the content of knowledge in curriculum is also combined with these skills. According to whole language viewpoint, the skill and strategy do not exhibit a linear improvement which is independent from each other; instead, children use all of their linguistic skills in literacy, and they learn the strategies (Vacca et al., 2003). Various critical considerations have been made due to some teachers' faulty interpretation of practices related to sound teaching during whole language program or because of not applying these practices, and as a consequence, the balanced literacy approach has ensued. Similar practices are included

in both approaches in terms of improving vocabulary and using newly learned words, which are important aspects of literacy skills. Activities of reading comprehension with reading texts, using story books, individualized reading, reading aloud, writing process, and writing conferences are some of these practices (Cramer, 2004). In balanced literacy practices, a balance has to be maintained between “teacher-directed explicit instruction” and “learner-directed discovery”, during the activities which will be performed for improving vocabulary. In various studies in the literature, the “teacher-directed explicit instruction” is considered as teaching vocabulary directly, and the “learner-directed discovery” is considered as teaching vocabulary indirectly (Baumann and Kameenui, 2004; Cramer, 2004; Diamond and Gutlohn, 2006; NRP, 2000). Each of the teacher-directed explicit instruction and learner-directed discovery strategies has to be used in practices applied for improving vocabulary, and they must be used in every lesson in line with the children’s needs (Rupley, Blair and Nichols, 2009). The training approaches and models such as constructivist approach, multiple intelligence approach, student-centered training, training that is sensitive to individual differences, thematic helix and skill approach are included in the Turkish Lesson Teaching Program (Ministry of Education [ME], 2009). In the practices recommended by the program, the learning fields including listening, speaking, reading, writing, visual reading and visual presentation have been presented in combination, and the activities have been based on these fields. In the course of constructivist learning approach, which forms the base of the program and is intended for problem-solving, the students participate in learning process actively, the preliminary knowledges are accepted as the initial point of training, and the social interaction is emphasized (Arslan, 2009). The contents of the Turkish Lesson Teaching Program and the approaches of the whole language and balanced literacy possess similar characteristics in terms of basic principles, learning fields and organization of activities; however the crowded class size, inability to spare enough time for every student, and the inadequacy of tools, equipments and materials make it difficult to achieve acquisitions aimed in Turkish lessons (Yalar, 2010; Yaman, 2009).

A great number of studies are available which investigate the variables associated with vocabulary of children with hearing loss (e.g., Connor, Craig, Raudenbush, Heavner and Zwolan, 2006; Fagan and Pisoni, 2010; Hayes, Geers, Treiman and Moog, 2009; Johnson and Goswami, 2010; Kelly, 1996; Mayne, Yoshinaga-Itano, Sedey and Carey, 1999). Nevertheless in some studies, the subjects such as comprehension of the meanings of unknown words (Anken and Holmes, 1977; MacGregor and Thomas, 1988), strategies of teaching words (Al-Hilawani, 2003; Calvert, 1981), and recollecting new words (Barker, 2003) have been investigated. On the other hand in some studies, the written language growth has been investigated (Wolbers, Dostal and Bowers, 2012), and the effectivity of the Morning Message has been evaluated (Wolbers, 2008) in the context of balanced and interactive writing instruction. A study in the national literature is available that investigates the improvement of vocabulary in the university students with impaired hearing during their professional training (Karasu, 2011). Except this, we could not reach a study that investigates the use of vocabulary in written expression of the hearing-impaired children. The written expression skill is set-up over the listening, speaking and reading skills. Therefore the improvement of the student’s other linguistic skills is effective on the improvement of written expression. Nevertheless, the improvement of listening, speaking and reading skills, and owning a rich vocabulary do not mean that the written expression skill will develop spontaneously, and the students will be able to use the words they’ve learned in their verbal and written expressions. The reason of this is the necessity of teaching many skills such as the organization of thoughts, the organization of the content of writing, building sentences, and the formal features of writing (Tompkins, 2000). Therefore the written expression skill develops slower compared to other linguistic skills also in the children with hearing loss, as it is the case in normally hearing children (Antia, Reed and Kreimeyer, 2005). Although the children with hearing loss experience a delay in improvement of linguistic skills resulting from impaired hearing, they undergo the same processes as the normally hearing children do, and also need the same teaching strategies and techniques for the improvement of vocabulary. Nevertheless, the fields of training needed by the children with hearing loss have to be assessed for improving their linguistic and academic skills, and thus the activities have to be enriched, the strategy training has to be made, and the practices allowing the use of linguistic skills have to be applied (Schirmer, Schaffer, Therrien and Schirmer, 2012), since the improvement of academic vocabulary causes a better comprehension of the subjects included in informative lessons, and it also has an important role in the improvement of literacy skills. Therefore by applying balanced literacy practices, we aimed in the present study to investigate the course of practices that allows the words encountered in informative lessons to be used in written expressions of the children with hearing loss. In line with this basic aim, we have focused on and sought answers to the following questions: (a) Which activities were performed in the course of implementation? (b) How were the activities performed?

## **2. Method**

### **2.1 Study Model**

This study uses the qualitative case study model for an in-depth examination of the activities that allow with hearing loss children to use the words encountered in content area courses in their writing. Case study refers to

the examination of one or several cases in depth, exploring real-world situations, systematically collecting and analyzing data, and presenting the results (Creswell, 2005).

### *2.2 Educational Environment in which the Study was Conducted*

The study was conducted in the Anadolu University-Education and Research Center for Hearing Impaired Children (ICEM). ICEM is a private, on day educational institution founded in 1979, which presents early diagnosis, instrumentation, family training, preschool training, and elementary school, secondary school and high school trainings for the children with hearing loss. The literacy program of the school had been conducted as a whole language format along the founding years, and the balanced literacy practices had been additionally applied thereafter. The formal school education in the ICEM begins from three years of age in combination with preschool training, and continues along the secondary school and high school trainings. The programs determined by the Ministry of National Education are applied in the preschool, elementary school, secondary school and high school classes, and the activities are enriched in line with the students' individual needs. Practices on instructional conversation, individualized reading and writing conferences are routinely applied for every student at individualized environments and at every class level, in combination with group lessons. This research has been conducted at the 4th class of the ICEM elementary school.

### *2.3 Participants*

The students attending the 4th class of the ICEM elementary school at the 2014-2015 school year, class teacher, and researcher participated in the research. Six students have been attending the 4th class of the ICEM elementary school within 2014-2015 school year. The chronological ages of the students varied between 9 years 9 months and 11 years 1 month. Four of the students use a cochlear implant, and 2 of them use a behind-the-ear hearing aid. Three students have a severe (71 to 95 dB HL) hearing loss, and the other three students have a profound (96+ dB HL) hearing loss. Of the students, 4 had been applied hearing aid before the age of two years, 1 before the age of three years, and 1 before the age of five years. The class teacher is a graduate of the Anadolu University Faculty of Education, Program of Teaching the Hearing-Impaired, and has been working at the elementary school and secondary school classes of the ICEM since the last 18 years. The class teacher has conducted individualized studies in combination with group lessons at the 4th class of the elementary school, along the 2014-2015 school year. The other participant of the study is the researcher who has been studying since the last 22 years on the subjects of improving and evaluating literacy skills of the students with hearing loss attending elementary school and secondary school classes.

### *2.4 Data Collection Tools*

In case studies, various data collection techniques are being used in order to ensure the plausibility of research (Creswell, 2005). The field observations, interviews, records of the validity meetings, lesson program, and the materials (productions) obtained in the course of research have been used as the data source in this research; additionally the diary of researcher (20 pages) was recorded, and the student productions and audiological documents were investigated.

### *2.5 Data Collection and Analysis*

This research, has been conducted between the dates of February 09, 2015 and May 29, 2015. The researcher observed class activities in the Turkish course, recorded the topics of activities, the materials used, and the techniques for group interaction, examined free writing assignments that followed the activities, and reviewed and corrected individual assignments.

The collected data were analyzed using descriptive analysis and identifying themes, methods used in qualitative case studies. The analysis generated three themes: a) improving vocabulary by using pictures, b) improving vocabulary by using texts, and c) improving vocabulary by using words and sentences. The design of the study, as well as its data collection and analysis stages, were supervised by the validity and reliability committee.

### *2.6 Validity and Reliability Process*

The validity and reliability of the study were reviewed by two field experts, specializing in education for students with hearing loss and qualitative research methods. The area experts examined a) diversity of data collection instruments, b) records of in-class observations and meetings with the teacher, c) the program implemented, activities and materials, d) the teacher's informal evaluations of students' language skills, e) research journal, and f) data collection process, data analysis, and the themes that emerged. To improve construct validity of the study, the research report was shared with the class teacher and feedback was received.

### 2.7 Research Ethics

At every stage of research, care was taken to provide the ethical principles such as volunteering, privacy, responsibility, equitable sharing, honesty, and diaphaneity. Consents were taken from the families of the research participants, and the real names of the students and the teacher were not used in publications.

## 3. Results

The study results are presented below, together with the relevant study questions.

### 3.1 Which activities were performed in the course of implementation?

Analysis of the data revealed that the group activities could be grouped under three themes: improving vocabulary by using pictures, improving vocabulary by using texts, and improving vocabulary by using words and sentences. Table 1 presents the Turkish activities performed during the study.

The activities in Turkish which were followed-up along the course of research are presented in Table 1.

Table 1. The Activities in Turkish Followed-up in the Course of Research.

Activity in Turkish	Subject of the Lesson	Date/Hour	Duration of Observation
Improving vocabulary by using pictures:	Narration of the story book "The Dragon of the Clumsy Witch Wini"	25.02.2015/10.30	65'
Improving vocabulary by using texts: Using story and informative texts	Reviewing the text titled "Earthquake"	20.03.2015/10.30	65'
Improving vocabulary by using texts: Text formation	Formation of the class book with subject "The Layers of the World"	03.04.2015/10.30	70'
	Formation of the class book with subject "Electricity"	22.05.2015/10.30	65'
Improving vocabulary by using words and sentences: Letter-sound practice	Determining the words including the letter "k" at the beginning or end of them, or within them	10.04.2015/10.30	30'
Improving vocabulary by using words and sentences: Constructing sentences	Constructing sentences with words including the letter "k" at the beginning or end of them, or within them	10.04.2015/11.00	30'
Improving vocabulary by using words and sentences: Question formation	Formation of questions from the class book titled "Erosion"	24.04.2015/10.30	40'
Improving vocabulary by using texts: Using story and informative texts	Reading the story titled "Ayşegül is Riding a Horse"	07.05.2015/12.40	40'
Improving vocabulary by using pictures:	Sharing the events in sequential cards which explain what has happened to cat and robot	18.05.2015/10.30	60'

As seen in Table 1, 9 activities in Turkish have been followed-up along the course of research. The subjects of the Turkish lessons are conducted in parallel with the subjects of the Social Sciences/Science and Technology lessons, which are performed in line with the interdisciplinary (correlational) design which is one of the subject-centered program designs. These lessons are routine activities applied in class every week along the school year.

These activities allow the words which were shared during Social Sciences/Science and Technology lessons, and which support the children to learn new knowledges related with subject, to be replicated and used during Turkish lessons in different contexts. For instance, an interdisciplinary subject related with natural disasters is presented by sharing knowledge during Social Sciences lessons; by analyzing a text, reading stories and forming class books during Turkish lessons; by solving problems and drawing graphics related with the times of natural disasters during Mathematics lessons, and by dramatization during Music lessons. In brief, it is presented by dispersing the subject within the contents of other lessons.

The titles of units presented during Social Sciences/Science and Technology lessons in combination with the activities in Turkish lesson followed-up in the course of research, and the words emphasized in the contents of these units, are presented in Table 2.

Table 2. Units of the Social Sciences/Science and Technology Lessons,  
Emphasized Words, Activities in Turkish Lesson

Units of the Social Sciences/ Science and Technology Lessons	Emphasized Words	Activities in Turkish Lesson	Date/Hour
Social Sciences/ The Place Where we Live	Direction, compass, northeast, southeast, northwest, southwest	<i>Improving vocabulary by using pictures:</i> Narration of the story book "The Dragon of the Clumsy Witch Wini"	25.02.2015/ 10.30
	Earthquake, fault line, precaution, immobilizing, earthquake bag	<i>Improving vocabulary by using texts:</i> <i>Using story and informative texts</i> Reviewing the text titled "Earthquake"	20.03.2015/ 10.30
Science and Technology/ Our Planet, the World	Litosphere, hydrosphere, atmosphere, mine, mineral	<i>Improving vocabulary by using texts:</i> <i>Text formation</i> Formation of the class book titled "Layers of the World"	03.04.2015/ 10.30
Social Sciences/ The Place Where We Live	Drought, famine, northeast, northwest, to drag, sphere, soil, center, core, layer	<i>Improving vocabulary by using words and sentences: Letter-sound practice</i> Determining the words including the letter "k" at the beginning or end of them, or within them	10.04.2015/ 10.30
		<i>Improving vocabulary by using words and sentences: Constructing sentences</i> Constructing sentences with words including the letter "k" at the beginning or end of them, or within them	10.04.2015/ 11.00
Science and Technology/ Our Planet, the World	Productive soil, precipitation, flood, to overflow (to flood), to struggle	<i>Improving vocabulary by using words and sentences: Question formation</i> Deriving questions from the school book titled "Erosion"	24.04.2015/ 10.30
Social Sciences/ From Production to Consumption	Basic needs, nutrition (feeding), sheltering, sleeping, obligation	<i>Improving vocabulary by using texts:</i> <i>Using story and informative texts</i> Reading the story titled "Ayşegül is Riding a Horse"	07.05.2015/ 12.40
	Consumption, consumer, production, conscious consumer, frugality	<i>Improving vocabulary by using pictures</i> Sharing the events in sequential cards which explain what has happened to cat and robot	18.05.2015/ 10.30
Science and Technology/ Electricity in Our Life	Dam, transformer, voltage, to save, to use unnecessarily	<i>Improving vocabulary by using texts:</i> <i>Text formation</i> Formation of the class book titled "Electricity"	22.05.2015/ 10.30

*Improving vocabulary by using pictures*

In the scope of improving vocabulary by using pictures, the activities of narrating a story book and sharing the events in sequential cards have been performed in class along the course of research.

The activity of storytelling was the firstly followed-up Turkish lesson in the class in which the story titled "The Dragon of the Clumsy Witch Wini" had been shared with students on the 25th of February, 2015. In the story which was shared in association with the unit titled "The Place Where We Live"; we aimed the usage of the words "direction, compass, northeast, southeast, northwest and east-west". These were the words which had been formerly encountered by the students during informative lessons. The story book had been selected by the teacher before the activity was applied, and it had been presented during the course of validity. It has been decided that the story book was associated with the subject of unit, and was also in accordance with the children's ages, and their levels of language and knowledge. The storytelling lesson to class lasted 40 minutes, and the follow-up activity was performed just after it. The follow-up activities are practices allowing the students to individually perform and consolidate a subject, knowledge or state which has been shared in group lessons.



After telling story to class, two follow-up activities have been performed. The initial one of these activities was the free writing study, during which the students have written the events in story, and the other one was the work cards on which the events in story have already been written (The researcher's diary, page 2, 25.02.2015).

#### *Free Writing Study*

The free writing studies are the activities in which the students express events, and their knowledges, thoughts and experiences with their own sentences. As being a part of the writing process, it's quite important to share the subject and events with group activities or individualized activities before the free writing study, and then to perform the writing procedure during the practices (Calkins, 1994). In this research, the free writing studies have been performed after group lessons during the activities of *improving vocabulary by using pictures*, and the activities of *using stories and informative texts* (The researcher's diary, pages 2-13, 25.02.2015-07.05.2015).

#### *Work Card*

The work cards are the imageable cards which have been prepared to make the students see, read and comprehend the written forms of sentences which are associated with the subject and event they have already heard verbally during group lessons (Travers, 2000). In this research, the class students have been given the work cards following storytelling, and they have read the sentences on these cards, written them in their notebooks, and illustrated the events (The researcher's diary, page 2, 25.02.2015). In this way, we wanted the students to remember and write a sentence with a correct word order, controlled if they comprehended what they've read, and also made it possible to make the words repeated in written context. Fifteen work cards have been prepared which were associated with the story titled "The Dragon of the Clumsy Witch Winnie" that was told to class students. In these work cards, the words "direction, compass, northeast, southeast, northwest, east-west", which were wanted to be repeated in lesson, have been placed within the story line. Some examples of sentences included in work cards are presented below.

##### *Example 1*

Winnie and Wilbur have lost their direction. They took out the compass and looked at it. The compass showed that they were in northwest.

##### *Example 2*

When Winnie raised her head, she saw the mother dragon. The mother dragon flied towards southeast, and went. Winnie had felt too sad.

Sharing the events in sequential cards is the other activity performed for improving vocabulary by using pictures. The sequential cards are the illustrated cards including a story that tells events which are in association with each other, in a sequential order (Roberts and Neal, 2004). On the 18th of May, 2015, the lesson sharing the events in sequential cards which explain what has happened to cat and robot, has been followed-up. In this lesson, the sequential cards consisting of 6 pictures have been used. The events explained in these pictures were as follows: in the first picture, the family gives a gift box to the child; in the second picture, a robot gets out of the box, and the cat in the house envies the robot; in the third picture, the cat mimics the acts of the robot; in the fourth picture, the robot dances, and the cat also tries to dance; in the fifth picture, the cat climbs upstairs, and the child helps while the robot is climbing upstairs; in the sixth picture, the cat climbs the tree but the robot cannot climb, the child pets the cat, and the cat enjoys this state. In these sequential cards associated with the subject "From Production to Consumption" which is included in Social Sciences lesson; the pictures drawing the students' interest were used, it was stated that the factories make productions, the products are purchased by consumers, and it's possible to be frugal by saving money, and repetition of the words "consumption, consumer, product, conscious consumer, frugality" was aimed. After sharing the events in sequential cards, the follow-up activity was conducted during which an individual sequencing booklet was formed as a free writing study. In this study, every student made the respective illustrations of the events included in sequential cards, wrote the events included in cards on every page, and completed the formation of booklet with its cover by entitling the story (The researcher's diary, page 15, 18.05.2015).

#### *Improving vocabulary by using texts*

In the course of research, the activities of a) using stories and informative texts, and b) forming a text have been performed for improving vocabulary by using texts.

a) In the course of research, and during the activity of using stories and informative texts; the text entitled "Earthquake" has been reviewed on the date 20.03.2015 (The researcher's diary, pages 2-3-4, 20.03.2015), and the story book titled "Ayşegül is Riding a Horse" has been read in the class on the date 07.05.2015) (The researcher's diary, page 13, 07.05.2015).

In the informative text reviewed on the date 20.03.2015, the words "earthquake, fault line, precaution, immobilization, earthquake bag", which were related with the subject of unit, have been emphasized.

The other activity performed in the scope of using stories and informative texts was the reading of the

story book titled “Ayşegül is Riding a Horse” to the class. In the story reading lesson conducted in the followed-up class on the date 07.05.2015, the repetition of the words “basic needs, nutrition (feeding), sheltering, sleeping, obligation” was aimed. In the follow-up activity of the reading story to class, the work cards were given which were related with the text that has been read, and the free writing study was performed then (The researcher’s diary, page 13, 07.05.2015). Thirteen work cards were written which were associated with the story titled “Ayşegül is Riding a Horse”, and the words aimed to be repeated in the lesson were placed within story. The examples of sentences included in work cards are presented below.

Example 3

The horse was hungry. It needed to eat. Ayşegül’s uncle got the horse inside the farm for feeding, sheltering, and sleeping.

Example 4

Ayşegül put the straws in the wheelbarrow. All of the animals in the farm were hungry. Ayşegül was taking straw to animals in order to meet their basic needs.

b) In the scope of the text formation activity, two class books have been prepared along the course of research. The class books are large books in which the verbal languages of students are written during group lessons, in line with a certain subject (Browne, 1996). One of these lessons is the class book with subject “The Layers of the World”, which has been performed on the date 03.04.2015. The other class book with subject “Electricity” has been practiced on the date 22.05.2015. The class books with subjects “The Layers of the World” and “Electricity” consisted of a cover page, and the following 5 pages which were associated with the subject.

During the formation of the class book entitled “The Layers of the World” which has been practiced on the date 03.04.2015, opportunities were presented for the repetition of the words “lithosphere, hydrosphere, atmosphere, mine, mineral”. Among these, the students did not use the words “mine, mineral” in the sentences they’ve made written (The researcher’s diary, pages 5-6, 03.04.2015). Below are presented the sentences that the students made written in the class book “The Layers of the World”:

1. *Page:* The World is large. The World has a shape of sphere. There are lands and seas in the World. The lands have a brown color, and the seas have a blue color.
2. *Page:* There are layers in the World. The air, waters and lands are the layers of the World. We can see the waters and lands, but cannot see the air.
3. *Page:* The air coats everywhere in the World. Therefore it is called “air sphere”. The air sphere protects the World from the Sun.
4. *Page:* The place where we live in the lands is called “stone sphere (Earth crust). There are mountains, plains, hills in the stone sphere.
5. *Page:* The  $\frac{3}{4}$ , that is to say the three fourth of the World is water. There are oceans, seas, lakes, rivers in the water sphere. Many living beings live in water sphere.

Another class book prepared in scope of the text formation activity is the class book with subject “Electricity”. In the class book “Electricity” formed on the date 22.05.2015, the repetition of the words “dam, transformer, voltage, to save, to use unnecessarily” was aimed. It’s observed that these words, which have been emphasized in association with the subject, are used by the students in compound and complex sentences (The researcher’s diary, page 19, 22.05.2015). Below are presented the sentences that the students made written in the class book with subject “Electricity”

- 1st *page:* Electricity generated in dams comes to the transformer. In transformer, the electricity power (voltage) is increased if it’s low, and decreased if it’s high. Then the electric energy reaches our houses, and the streets, schools, mosques and workplaces with cables.
2. *Page:* The electric energy is generated from water, wind, sun energy, natural gas and coal. The generated electric energy is used in houses, schools, workplaces, factories, hospitals.
3. *Page:* We must not use torn, degenerated cables in order to protect from electricity accidents. We must not climb electricity pylons. We must not touch a socket or electricity button when our hands are wet. We must change a light bulb when the button is closed. We must not touch a person experiencing electric shock, we must move the person away from the plug with a board.
4. *Page:* We use light bulb, bulb holder, switch, battery, battery bed and conductive wire in order to set a circuit. We initially put the light bulb in bulb holder, place the batteries in battery bed. We tie the battery and light bulb

with a conductive wire. The bulb lights when the switch is opened.

5. Page: To save means not to use unnecessarily. We must not keep the lights on unnecessarily. We must close the fuse when we go on a holiday. We must close electric tools when leaving the house. We save in this way. We don't pay too much electricity bill.

#### *Improving vocabulary by using words and sentences*

Along the course of research, the letter-sound study, and the activities of sentence construction, question formation and class dictionary formation have been applied for improving vocabulary by using words and sentences.

The Turkish lesson followed-up on the date 10.04.2015 was the activity conducted for finding sentences which include the letter 'k' at the beginning-at the end-within them, and constructing sentences with these words. In this activity, the students were demanded to remember the words emphasized in Science and Technology, Social Sciences and Turkish lessons, to record them on the corresponding sections, and to construct sentences with them.

Regarding the decision of the validity meeting which was held on the date 23.03.2015 in the scope of improving vocabulary by using words and sentences; the students were demanded to form questions related with the knowledge and events written in class book, by using the class book entitled 'Erosion' which had been formed before the date 24.04.2015. During the lesson; the questions were written with the students behind the pages of class book, in three categories as textual open questions, textual closed questions and the questions based on knowledge and experiences, and the meanings of these categories were shared.

Class dictionaries are the materials prepared for the later remembrance and usage of the words which have been encountered in group lessons. At the validity meeting held on the date 06.04.2015 for the words to be repeated in Turkish lessons, it has been decided to form a class dictionary, and to write the newly emerging words in this dictionary with their roots and affixes (The researcher's diary, page 7, 06.04.2015). From this date on, maximally 5 words emerging from every Turkish lesson were recorded in this dictionary, and the students were demanded to select 5 words from the dictionary every day, and to construct sentences with these words. The sentence construction studies have been conducted as the individual construction of the students' own sentences every day at home, and the construction of sentences in school within group, under the guidance of teacher. The students' sentences constructed at home have been controlled every day, and the errors of word order in the sentences have been corrected in individualized conditions, along with the student (The researcher's diary, pages 10-11, 10.04.2015).

#### *3.2 How were the activities performed?*

Activities to improve vocabulary by using pictures, texts, and words and sentences were performed as follows:

##### *Improving vocabulary by using pictures*

In the course of research, the firstly followed-up Turkish lesson was the activity of storytelling to the class in which the story titled 'The Dragon of the Clumsy Witch Winnie' was shared with students on the date 25.02.2015. The teacher showed a story book and read the title of the book, asked questions about the characters and events on the cover, and shared the responses given by a student with the other students in the group. Talking about the cover of a book allows students to make guesses about the events in the book by making use of their knowledge of story structures (Hoyt, 1992). In the activity, each page of the story was shown to students following the order of the book and students were asked to describe the event; in addition to questions about the events pictured, questions about cause and effect relationships and questions requiring students to predict the rest of the story were asked, and relationships between the events were explained. Question diversity is important for students to share their experiences and be exposed to novel linguistic practices (Fields, Groth & Spangler, 2004). Words emphasized in content are courses were re-used when narrating the events in the story, and students were asked about the meanings of these words and allowed to use these words in their narratives. When students had difficulty pronouncing the words or failed to use them in the proper context, the teacher wrote the word on the board, read it out loud, and shared its meaning with the class (The researcher's diary, pg. 2, 25.02.2015). Utilizing the board in this manner is important for drawing the group's attention to the word, demonstrating the letters and syllables in the word, and serving as a model regarding its pronunciation (Baumann & Kameenui, 2004).

In the scope of improving vocabulary by using pictures, the lesson sharing the events in sequential cards which explain what has happened to cat and robot, has been followed-up on the date 18.05.2015. The teacher has asked questions related with events in sequential cards, shared the answers to questions with the group, and made every student to participate in the lesson. While performing the lesson, it has been observed that the teacher wrote the words associated with event on the board, read them, and made the group to read them. After a short time, some students forgot the meanings of these words, and asked again the meanings of them (The



researcher's diary, pages 14-15, 18.05.2015). The student then re-explained the meanings of the words, gave examples of their usage in sentences, and checked student understanding by asking questions (The researcher's diary, pg. 14-15, 18.05.2015). When a large number of words is involved, students with hearing loss, similar to their normal-hearing peers, may have difficulty remembering the meanings of the words. Therefore, new words should be introduced in activities that are meaningful for the students, and their understanding should be checked frequently (Baumann & Kameenui, 2004).

#### *Improving vocabulary by using texts*

In the scope of improving vocabulary by using texts, the findings associated with the activities of using story and informative texts, and text formation are presented below.

During the activity of using story and informative texts, the informative text entitled "Earthquake" has been reviewed on the date 20.03.2015. It has been observed that the children could read the words in the text by making analysis, and experienced difficulty in decoding and comprehending the words having negative affixes in combination with several affixes (e.g the words "unremembering", "unfixing"). The teacher underlined these words, acted as a model by reading them out loud, and asked questions that encouraged students to guess and infer meanings to the words making use of the totality of the text (The researcher's diary, pg. 4, 20.03.2015). Discovering the meaning of a word by examining its use in context requires making use of past linguistic experiences and making inferences, and supports the development of independent comprehension skills (Harp & Brewer, 2005). Students were observed to guess the meanings of some of the words correctly, and have difficulty making use of contextual clues in the case of others. The teacher explained the meanings of the words with which the students had difficulties (The researcher's diary, pg. 4, 20.03.2015). Direct teaching of the words in this manner is used when students have difficulty discovering the meaning on their own (Rupley, Blair & Nichols, 2009).

In the scope of using story and informative texts; the lesson during which the story titled "Ayşegül is Riding a Horse" was read to group, has been followed-up on the date 07.05.2016. The teacher read the story page by page, had the narrations done by the students, and shared the answers to questions with the group. During the observation of lesson, it has been assessed that the board was used effectively, the words, clauses and sentences causing difficulty for students during narration were made to be read by writing on the board, the meanings of them were shared, and attention was drawn to the spellings of words (The researcher's diary, page 13, 07.05.2015).

During the writing study which was performed on the date 08.05.2016 following the story reading activity, the stories written by the students were reviewed. Regarding the story titled "Ayşegül is Riding a Horse", it has been observed that the students tried to use the words, clauses and sentences which were shared along one week related with story, some of the sentences of students included word order errors, and most of them wrote the newly learned words correctly (The researcher's diary, page 14, 08.05.2015). Repeated use of newly encountered words in various activities, ensuring student participation and providing direct and indirect support to improve vocabulary, help develop both verbal language skills and literacy skills (Harp & Brewer, 2005).

As part of text creation, a class book with the title Layers of the Earth was created on 03.04.2015, and a class book with the title Electricity on 22.05.2015. In the scope of text formation, the class book entitled "The Layers of the World" has been prepared on the date 03.04.2015. During observation of lesson, it has been assessed that the asked questions were related with the subject and the usage of the determined words, the answers were shared with the group, and the sentences told by students were written on the pages of class book. After the sentences were written, they were read out loud by the students, and the meanings of the words and sentences were checked. Class books are reading materials that are based on the Language Experience Approach (LEA) and consist of students' own sentences. Class books are organized around topics and express knowledge in the words of the students. Class books offer various advantages in the development of literacy skills of children with special needs. These advantages include allowing students to make of the words, demonstrating the written form of words and sentences, facilitating reading and comprehension because they consist of students' own sentences, and the easy recollection of words and language structures (Browne, 1996).

#### *Improving vocabulary by using words and sentences*

In the scope of improving vocabulary by using words and sentences; the letter-sound study, and the activities of sentence construction and question formation have been examined. During the letter-sound study followed-up on the date 10.04.2015, the students were demanded to find words including the letter "k" at the beginning or at the end of them, or within them. The students stated the words "cake, pencil, sweater, shortage, layer, thick, drought, northwest, northeast, north, snow, neighbor, sphere" as the examples of words including the letter "k" at the beginning of them, the words "fluent, center, act, drag, save, stone sphere, air sphere, water sphere, earth crust, climate" as the examples of words including the letter "k" within them, and the words "cake, sweater,

shortage, drought, plastic, soil, core” as the examples of words including the letter “k” at the end of them. During the lesson observation, it has been assessed that the students constructed sentences with these words in accordance with the meaning, some sentences included word order errors, and the contents of the sentences generally consisted of the word’s definition; in other words, these words have been constructed as the form of their usage in the informative lessons. For instance; the sentence “Food lessens in shortage” has been constructed related with the word “shortage”, and the sentence “The World has core at its center” has been constructed related with the word “center”. The teacher has asked the meanings of the words told by students, and shared the answers with whole group (The researcher’s diary, pages 10-11, 10.04.2015). Students with hearing loss have difficulty transmitting knowledge because the delayed development of their linguistic skills. Therefore, newly encountered information should be repeated in various activities so that students get a chance to use them in different contexts. As students use language, teachers can help improve the vocabulary and syntactic, semantic and pragmatic skills of students by acting as models in group or one-on-one activities (Schirmer, 2000).

On the date 23.03.2015; the students were demanded to form questions from the class book entitled “Erosion” in accordance with the three question types, on the date 24.04.2016. During the lesson; the questions were written together with the students behind the pages of class book, in three categories as the textual open questions, textual closed questions and the questions based on knowledge and experiences, and the meanings of these categories were shared. It has been emphasized that the textual open questions are the questions the answers of which are directly written in the text, the textual closed questions are the questions requiring to construct relationships and to combine events, and the knowledge and experience questions are the questions which require to combine the event written in the text with the student’s experiences. The first page of the class book was opened and initially read by the teacher, it was then made to be read by the group, and the meaning was shared by asking what they had understood. The teacher wanted from the students to ask questions in accordance with the three question types. Each student asked questions which were in accordance with the three question types and which were related with the page that was read in order, and categorized the questions. For instance, being associated with the initial page, students asked the question “Which soil is dragged by the rain waters and wind?” as the textual open question, “Why does erosion become?” as the textual closed question, and “What are the things that can become if the rain waters and wind do not drag the productive soil?” as the knowledge and experience question. The teacher wrote the questions asked by students in the corresponding category, and made the group to read them (The researcher’s diary, pages 11-12, 24.04.2015). To be able to ask questions on the basis of a written text, students should first read and comprehend the text, question the contents of the text, and make use their language skills in the process. Class books that consist of students’ own sentences allow students to read and comprehend the text, generate questions making use of the words they encounter in group sessions, and answer these questions (Browne, 1996).

#### 4. Discussion

The discussion of the results of the study followed the relevant study questions.

##### 4.1 Which activities were performed in the course of implementation?

The children existing with normal development can learn many words spontaneously within daily life (Akhtar, Jipson, Callanan, 2001; Oetting, Rice, Swank, 1995); however the children with hearing loss experience difficulty in comprehending the meanings of words and using the words in different contexts because of the deficiency of knowledge and experience, in spite of using a cochlear implant and processing many words acoustically (Messier, 2015). Because hearing loss existing at younger ages makes the listening and speaking skills difficult to be acquired spontaneously by the individual, and this state leads to a delay in the development of literacy skills in school age. Early diagnosis of hearing loss and application of hearing aid, starting education early, organization of training environments which allow the children to acquire new literacy experiences by using their own experiences, and applying teaching practices in light of the students’ needs play important role in minimizing this delay. Balanced literacy practices are the eclectic literacy approaches in which the listening, speaking and literacy skills are treated as a whole, and the strategies and skills are taught with active participation of students, by considering their experiences (Vacca, et al, 2003). Balanced literacy practices provide important advantages for the development of literacy skills in children with hearing loss, because it treats the listening, speaking and literacy skills as a whole, allows the children to use their experiences, and is activity-based (Pressley, Roehrig, Bogner, Raphael and Dolezal, 2002; Schirmer, 2000; Uzuner, 2007). In this research, it has been observed that the children with hearing loss attending the 4th class of elementary school experience difficulty in using the newly learned academic words in their writings; in order to meet this need, the activities requiring the use of the listening, speaking and literacy skills in combination have been applied, in the scope of (a) improving vocabulary by using pictures, (b) improving vocabulary by using texts, and (c) improving vocabulary by using words and sentences.

*a) Improving vocabulary by using pictures:* In this research, practices of telling story book to the class and sharing the events in sequential cards have been performed in the scope of improving vocabulary by using pictures. Story books and sequential cards are activities which support the development of consciousness associated with the story structure, emphasize the order of events and the relationships between events, allow the use of the reading strategies such as estimation, making inference and making summary, and provide the improvement of vocabulary (Miller and Pennycuff, 2008; Trussell and Easterbrooks, 2014). Additionally, these activities support the estimation of the meanings of words (Isbell, Sobol, Lindauer and Lowrance, 2004), by providing opportunity for the children to see and use the words in different contexts (Messier, 2015). The activities of telling story book to the class, and sharing the events in sequential cards can provide these advantages only if the selected materials own some properties. The pictures, events, and the subject must be in accordance with the children's ages, languages and levels of knowledge, they must attract attention in order to provide active participation and motivation, and must be parallel with the class subject (Beaty and Pratt, 2003). In this research, in order to allow the students to use the words emphasized in informative lessons, the materials in accordance with the class subject were chosen in the activities of telling story book to the class and sharing the events in sequential cards, the questions were asked which allowed the students to explain events, to construct relationships between events and to estimate, the meanings of the words and their usage within context were emphasized, and opportunities were provided for the students to use the words in written language, by applying follow-up activity studies.

The word knowledge must be treated as a continuously improving process. This process consists of four stages. Stage One: I have never seen this word before. Stage Two: I had heard this word before, but I don't know its meaning. Stage Three: When I see the word within context, I know that it is related with.. Stage Four: I know the word very well. Harp and Brewer (2005) have added one more stage at the end of this process, and have expressed the Stage Five as "I can use this word within a sentence or can use the word in various forms in accordance with its meaning". The findings of this research reveal that the first two stages exist in informative lessons, and the third stage exists in the activities in which the words are used in the context. Being in line with the goal of the research, various activities have been applied which require the use of the listening, speaking and literacy skills in combination with each other and thus support the use of the newly learned words in written language, in order to achieve the fourth and the fifth stages which are associated with the word knowledge. In this context, another predominant finding of the course of research is to conduct free writing studies which are performed with follow-up activity studies and which allow the children to use the words emphasized in group lesson, just after sharing the activities in group lessons. The quality of the written production increases with the application of writing process. The children with hearing loss can also improve their written expression skills, by the application of writing process in the right time (Girgin and Karasu, 2007; Yoshinaga-Itano and Downey, 1992). The writing process consists of four stages which are the selection of subject, drawing up an outline, reviewing, correction and publishing (Hyland, 2002; Richek, Caldwell, Jennings and Lerner, 2002; Tompkins, 2000). These stages support the children to use the newly learned words in the context, in terms of sharing the activity before the writing studies, emphasizing the words, planning of the thoughts that the student wants to write, conducting writing procedure thereafter, and reviewing the written productions together with the child (Gunning, 2003). The individualized studies have an important role in the improvement of the linguistic and academic skills of the children with special needs, in terms of supporting the individual requirements. The acquisitions aimed in group lessons are based on sharing the subject and experiences within group interaction, presenting the knowledge, repeating, and strategy teaching. In the case of the children with hearing loss, the individualized studies have to include the applications of instructional conversations supporting the listening and speaking skills, *individualized reading studies* supporting the reading skills and emphasizing the strategies that the child needs, and individualized writing conferences in the scope of the stage of reviewing the writing process and correction, and these studies have to be planned in a way which supports the knowledge, skills and strategies emphasized in group lessons (Clark, 2007; Schirmer, 2000; Williams, 2004). In the course of this research; the stories written by students and the sentences constructed by them during the instructional conversation and individualized reading studies, have been reviewed and corrected in individualized environments in the scope of writing conferences, and they have been published thereafter.

*b) Improving vocabulary by using texts:* The effective teaching of vocabulary includes three components which are the integration, sufficient repetition, and meaningful use. The integration includes the construction of relationship by the child between the previous knowledge and newly learned words. The repetition requires more than one activity associated with the meanings and usages of the new words. The meaningful use includes the development of an affluent conceptual framework providing opportunity for the children to use the new words (Schirmer, 2000). The written texts take an important place in the formation of this conceptual framework by the use of the skills related with understanding the things that are read or understanding the things that are listened to (Kindle, 2009; NRP, 2000). In this research, story and informative texts were used, and texts were formed by making class books in the scope of improving vocabulary by using texts. The story and informative

texts were made with the activities of reading story to the class, and text review. While supporting the improvement of the skills related with understanding the story that is listened to, reading story to the class also leads to the improvement of the students' reading skills such as vocabulary, consciousness associated with story structure, constructing relationships between events, and estimation. On the other hand, with the use of reading strategies, activities of text review contribute to the improvement of the skills related with understanding the things that are read (Elbro and Buch-Iversen, 2013; Graesser, Singer and Trabasso, 1994). As it is the case in the normally hearing children, the children with hearing loss also experience difficulty in understanding the texts encountered during informative lessons. The reason of this is explained by the complexity of the informative text structures, diversity of the words used in these texts, and the deficiency of the children's knowledge and experiences associated with the subject (Reutzel and Cooter, 2007). The children have to acquire the reading strategies and use these skills in various contexts, in order to support the understanding of texts encountered in informative lessons. The reading story to class and the text review lessons which are prepared at teaching level lead to the improvement of vocabulary, and they also provide important opportunities for the acquisition and the use of the literacy strategies (Schirmer, 2000).

While learning new words by listening to or reading, the children use the words and linguistic structures that they know. The use of the unknown or newly learned words within a written text (Blachowicz, 1993), or the placement of them in story books (McLeod and McDade, 2011) make it easy for the student to comprehend the meaning of word, by using the context clues such as the structure of the sentence, its suffixes, and its place in the word order (Lwin, 2016). The number of new words emphasized in a lesson must be limited with a maximum of 3-5 words. Because, a student meeting with a great number of words would be focused on the meaning of each word individually, instead of comprehending the general meaning of the sentence or text by using the context clues, and would experience difficulty in using these words by remembering them (Scott and Nagy, 2004). In this research; the words emphasized in informative lessons were placed within the literacy activities which have been prepared, the use of the words in different contexts was presented, and care was taken for the number of words which were aimed to be used.

Another activity applied for improving vocabulary by using texts is the text formation activity. In the present research, in order to make the students to use the words and linguistic structures emphasized in informative lessons; the texts including the students' knowledge and experiences have been formed by making class books. The class books are based on the Language Experience Approach, and the events, knowledges and thoughts told by the students to the class books, are written by making them in concordance with the word order rules. Therefore the class books allow the students to see the written forms of the words, clauses and sentences which are used by them in their verbal languages, to understand the relationship between the writing and verbal language, and they also lead to the improvement of the letter-sound relationship, word order, meaning and the usage skills (Johnson, 2016; Rasinski and Padak, 2004). Therefore the Language Experience Approach, which has been treated in the recent years under the Whole Language Approach, presents important advantages for supporting the literacy skills of the children experiencing delay in the development of their linguistic skills (Miller, 2005).

*c) Improving vocabulary by using words and sentences:* For improving vocabulary, various activities can be organized in line with emphasizing the words within context and apart from context. Defining the word, finding other words which remind the meaning of the word, and demonstrating these with various graphic organizers cause the new words to be emphasized directly (Luckner and Cooke, 2010; Schirmer, 2000). In this research; the activities of letter-sound study, sentence construction and question formation have been applied in the scope of improving vocabulary by using words and sentences. The letter-sound study allows the students to use the newly learned words associated with the selected letter, and the words they've already known, by paying attention to letter-sound relationship. The graphic organizers are directly associated with the subject and they do not include an application regarding the letter-sound relationship, which is the basic fact differing between the letter-sound study and the graphic organizers such as meaning map. "Finding the words which include the letter 'k' at the beginning/at the end of them or within them", which has been applied in this research in scope of the letter-sound relationship, consolidates the meanings of the newly learned words and those of the words the students have already known (Graham and Kely, 1998). Sentence construction studies allow the use of certain words or linguistic structures in different environments and states, in concordance with the rules of word order and the meanings of the word and sentence. In this research, following the activity related with letter-sound relationship, the students were requested to construct sentences using the newly learned words, and the words they tell, each sentence was written down, and the meaning of the sentence was shared with the group. Sentence construction studies can be conducted as the construction of sentences independently by the students themselves, or by studying within group with the teacher. What is important during these practices is the control of the sentences by the teacher in terms of being consistent with word order, meaning and usage skills, and to perform this act with the student (Gunning, 2003). Question formation was the other activity performed in this research in the scope of improving vocabulary by using words and sentences. Question formation studies require the use of



reading skills, to think related with the subject, to be able to use question-answer strategy, and while doing these, to be able to reuse the words within context which have already been used in meaning construction (Chien, 2013; Harrel and Jordan, 2002; Schirmer, et al., 2012; Cooter and Flynt, 1996). Question formation studies can be done by using ready-to-use texts, or in order to make the students to focus on the question types and question-answer relationship instead of the meaning of text, can also be performed by using texts that the students have knowledge about and are experienced in (Mason, 2004). In the present research, the question formation activity has been performed by using class books in which the students' experiences were written which were expressed with their own sentences.

Another fact emphasized in improving vocabulary and using the newly learned words is to organize training environments, and to present the words used within context and apart from the context at places where the children can see every time (language-and-word-rich environment). For instance; hanging on the panel the nominative cases of the new words and their uses within sentences, group and individual word bags, class dictionary, and class corners for publishing writings support the children to use the newly encountered words (Blachowicz, Fisher and Ogle, 2006; Lane and Allen, 2010; Phillips, Foote and Harper, 2008). In the course of this research, the words derived in group lessons and the texts reviewed in sentence construction studies have been hung on the panel, the class dictionary has been formed, and the words and their definitions have been recorded in it, the class books have been presented in the corners that the children could reach, and the written productions have been published following the stage of review and correction conducted at individualized environments.

#### *4.2 How were the activities performed?*

In applications related with the improvement of vocabulary; the teacher-directed instruction, in other words teaching words directly, and the learner-directed discovery, in other words teaching words indirectly, have to be used in combination in line with the students' needs (Diamond and Gutlohn, 2006; Rupley, Blair and Nichols, 2009). The teacher-directed explicit instruction is performed if the child has a great deal of knowledge and experience deficiency, if the child's success will reduce without the teacher's direction, if he/she cannot discover knowledge by himself/herself, and if he/she has a low confidence level. The learner-directed discovery has to be performed if the child can use strategies by acquiring his/her own literacy experiences, if he/she listens to the recommendations and turns back for completing a job he/she knows, and if he/she is willing to listen to for learning how to perform when he/she wants to continue (Harp and Brewer, 2005). In this research, in the lessons allowing the children with hearing loss to use the newly learned academic words in their written expressions, the teacher-directed explicit instruction and the learner-directed discovery have been used in combination, in line with the children's individual needs. For instance; during the examination of the informative text entitled "Earthquake" on the date 20.03.2015, one of the decisions made associated with the running of lesson was to give opportunity for the students to estimate the meanings of the newly encountered words, from the whole text (The researcher's diary, pages 2-3-4, 20.03.2015). In this way, the students were allowed to reach the meanings of words by directing themselves and using their literacy experiences. At the same time, during the storytelling activity to the class which was shared the story titled "The Dragon of the Clumsy Witch Winnie" on the date 25.02.2015, it has been decided that the board should be used more often, and the newly encountered words or the words causing difficulty in being used by children, should be emphasized by writing on the board (The researcher's diary, page 2, 25.02.2015). This decision led to the use of the teacher-directed open teaching, in other words teaching directly, in teaching or repeating words in the cases when the students cannot discover knowledge by themselves. In the improvement of vocabulary, emphasizing the meanings of words when needed by students makes the students to think about the meaning of word, and facilitates the use of the word (Coyne, Zipoli, Chard, Faggella-Luby, Ruby, Santoro and Baker, 2009; McKeown and Beck, 2004; Rupley, Blair and Nichols, 2009).

The techniques used in teaching applications are quite important in terms of providing student participation, making learning meaningful and easy, and providing learning persistency (Reutzel and Cooter, 1996). In the case of children with hearing loss, the techniques used in lesson aim various facts which support the use of the linguistic skills in combination, such as drawing the child's attention, making the use of the listening and speaking skills, making the use of the emphasized linguistic structures, and constructing relationship between the word's structure and meaning (Paul, 2001). In the present research; making the words, clauses and sentences which are newly learned or which cause difficulty in being used by children, written on the board, making these read by the teacher and being a model, making these read by the students, making group repetitions, and controlling the students while listening to the teacher and each other may be given as examples of the techniques used during the application of activities. The balanced literacy approach is a child-centered one. During the application of activities, an active participation of the students has to be provided, and the strategies and techniques allowing them to discover knowledge have to be used (Harp and Brewer, 2005). In these practices, the number of students in class has an important role in the effectivity of teaching. In this research, the



existence of 6 students with hearing loss in the class facilitated the application of strategies and techniques which support the use of the listening, speaking and literacy skills in combination. It has to be kept in mind that the crowded classes, even in the case of children showing normal development, may limit the benefit that would be obtained from the child-centered applications such as balanced literacy approach.

## 5. Conclusion and Suggestions

In this research; (a) the words emphasized in informative lessons have been presented in Turkish lessons with various activities, (b) opportunity was provided for the use of the words in different contexts, (c) stages of the writing process have been applied, (d) in line with the students' needs, a balance has been constructed between the teacher-directed open/instructive teaching and the student's discovery by self-direction.

This research is limited with the training environment in which the research was conducted, and the activities used in the course of application. In spite of the expectancy that the evidence-based practices have to consist of experimental and semi-experimental studies in teaching applications, the research-based best practices are emphasized in the current literature especially in the improvement of linguistic skills. It's observed that the number of experimental and semi-experimental studies is little if any when 'the children with hearing loss and the improvement of literacy skills' is considered. One of the reasons of this is the heterogeneous distribution of the individual and environmental factors such as the time of existence of hearing loss in the children with hearing loss, the degree of hearing loss, the age of diagnosis and device application, the quality of the training environment, and the socioeconomic properties of the families, which directly affect the development of linguistic skills. The literacy skills consist of a great number of subskills, and the teaching practices associated with literacy skills require making repetitions within teaching process in line with the children's needs, diversifying the activities, using various techniques and strategies of teaching in combination, and applying the group studies and individualized studies in combination, within the same course, which form the other reason. When these characteristics are considered, the action researches, which are scientific-based because of the availability of validity and reliability, and which also allow the enrichment of activities in line with the students' needs, and assessment of problems and evaluation of the attempts regarding solution, serve for the analysis of the process in teaching applications. Thus in light of the results of this research, it's possible to make the below recommendations associated with practices and the future researches. Supporting the improvement of vocabulary is an important part of the literacy applications. Providing the continuity of the applications for improving vocabulary by using picture, improving vocabulary by using text and improving vocabulary by using words and sentences, and maintaining the activities in an increasing manner with the existence of newly encountered words, may serve for the use of the academic words in written expressions in the children with hearing loss. In the future researches, each activity may be treated individually along the course of practices and their contents may be analyzed, and the limitations encountered in practice may be identified. Besides, the activities for improving vocabulary included in the elementary school curriculum program, and the course of practices may be reviewed, and the contribution of these activities to academic vocabulary may be assessed. In practice and also in future researches, the use of the newly learned words may be evaluated in the students with hearing loss who are in mainstreaming environment, and the supportive training services may be presented to meet their needs.

## References

- Akay, E. (2011). *An examination of the process of the resource room application designed for the mainstreamed primary school aged hearing impaired students*. Unpublished master thesis, Anadolu University, Eskisehir.
- Akhtar, N., Jipson J., & Callanan M.A. (2001). Learning words through overhearing. *Child Development*, 72, 416-430.
- Al-Hilawani, Y. A. (2003). Clinical examination of three methods of teaching reading comprehension to deaf and hard-of-hearing students: From research to classroom applications. *Journal of Deaf Studies and Deaf Education*, 8(2), 146-156.
- Altrichter, H., Posch, P. & Somekh, B. (2005). *Teachers investigate their work: An introduction to the methods of action research* (5th ed.). London: Taylor & Francis.
- Anken, J. R., & Holmes, D.W. (1977). Use of adapted "classics" in a reading program for deaf students. *American Annals of the Deaf*, 122(1), 8-14.
- Antia, S. D., Reed, S., & Kreimeyer, K. H. (2005). Written language of deaf and hard-of-hearing students in public schools. *Journal of Deaf Studies and Deaf Education*, 10(3), 244-255.
- Arslan, A. (2009). Yapılandırmacı öğrenme yaklaşımı ve Türkçe öğretimi. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 13(1), 143-154.
- Barker, L. J. (2003). Computer-assisted vocabulary acquisition: The CSLU vocabulary tutor in oral-deaf education. *Journal of Deaf Studies and Deaf Education*, 8, 187-198.
- Baumann, J. F. & Kameenui, E. J. (2004). *Vocabulary instruction: Research to practice*. New York: The

- Guildford Press.
- Beatty, J. J. & Pratt, L. (2003). *Early literacy in preschool and kindergarten*. New Jersey: Pearson Education, Inc.
- Blachowicz, C. L. Z. (1993). C(2)QU: Modeling context use in the classroom. *The Reading Teacher*, 47(3), 268–269.
- Blachowicz, C. L. Z., Fisher, P. J. L. & Ogle, D. (2006). Vocabulary: Questions from the classroom. *Reading Research Quarterly*, 41(4), 524–539.
- Browne, A. (1996). *Developing language and literacy 3-8*. London: Paul Chapman Publishing Ltd.
- Calkins, L. M. (1994). *The art of teaching writing* (2nd ed). Portsmouth New Hampshire: Heinemann.
- Calvert, D. R. (1981). EPIC (Experimental Project in Instructional Concentration): Report of a study of the influence of intensifying instruction for elementary-school-age deaf children. *American Annals of the Deaf*, 126(8), 865–984.
- Chien, C. W. (2013). Using Raphael's QARs as differentiated instruction with picture books. *English Teaching Forum*, 51(3), 20-27.
- Clark M (2007). *A practical guide to quality interaction with children who have a hearing loss*. Oxfordshire: Plural Publishing, Inc.
- Colin, S., Mangan, A., Ecalle, J. & Leybaert, J. (2007). Relation between deaf children's phonological skills in kindergarten and word recognition performance in first grade. *Journal of Child Psychology and Psychiatry*, 48(2), 139-146.
- Connor, C., Craig, H. K., Raudenbush, S. W., Heavner, K., & Zwolan, T. A. (2006). The age at which young deaf children receive cochlear implants and their vocabulary and speech-production growth: Is there an added value for early implantation? *Ear and Hearing*, 27(6), 628-644.
- Cooter, R. B. & Flynt, E. S. (1996). *Teaching reading in the content areas: Developing content literacy for all students*. NY: Merrill.
- Coyne, M. D., Zipoli, R. P., Chard, D. J., Faggella-Luby, M., Ruby, M., Santoro, L. E. & Baker, S. (2009). Direct instruction of comprehension: Instructional examples from intervention research on listening and reading comprehension. *Reading & Writing Quarterly*, 25(2-3), 221-245.
- Cramer, R. L. (2004). *The language arts, a balanced approach to teaching reading, writing, listening, talking and thinking*. Boston: Pearson Inc.
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Pearson Education.
- Diamond, L. & Gutlohn, L. (2006). Teaching vocabulary. 25.10.2008 tarihinde <http://www.idonline.org/article/9943> adresinden edinilmiştir.
- Elbro, C. & Buch-Iversen, I. (2013). Activation of background knowledge for inference making: Effects on reading comprehension. *Scientific Studies of Reading*, 17(6), 435-452.
- Fagan M. & Pisoni D. (2010). Hearing experience and receptive vocabulary development in deaf children with cochlear implants. *Journal of Deaf Studies and Deaf Education*, 15, 149- 161.
- Fields, M. V., Groth, L. A. & Spangler, K. L. (2004). *Let's begin reading right* (5th ed.). New Jersey: Pearson Education, Inc.
- Gay, L. R., Mills, G. E. M. & Airasian, P. (2006). *Educational research competencies for analysis and applications* (8th ed.). New Jersey: Pearson Education.
- Geers, A. E. (2003). Predictors of reading skill development in children with early cochlear implantation. *Ear and Hearing*, 24, 59-68.
- Girgin, Ü. & Karasu, H. P. (2007). İşitsel/sözel yaklaşımla eğitim gören işitme engelli öğrencilerin yazılı anlatım becerilerinin değerlendirilmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 33, 146-156.
- Graesser, A. C., Singer, M. & Trabasso, T. (1994). Constructing inferences during narrative text comprehension. *Psychological Review*, 101(3), 371-395.
- Graham, J. & Kely, A. (1998). *Reading under control* (2nd ed.). London: David Fulton Publishers.
- Gunning, T. G. (2003). *Creating literacy instruction for all children* (4th ed.). Boston: Allyn & Bacon.
- Harp, B. & Brewer, J. A. (2005). *The informed reading teacher: Research-based practice*. New Jersey: Prentice Hall, Inc.
- Harrel, A. & Jordan, M. (2002). *50 Active Learning Strategies for Improving Reading Comprehension*. Ohio: Merrill Prentice Hall.
- Hayes, H., Geers, A. E., Treiman, R., & Moog, J. S. (2009). Receptive vocabulary development in deaf children with cochlear implants: Achievement in an intensive auditory-oral educational setting. *Ear & Hearing*, 30(1), 128-135.
- Hyland, K. (2002). *Teaching and researching writing*. Harlow: Longman Pearson Education.
- Isbell, R., Sobol, J., Lindauer, L. & Lowrance, A. (2004) The effects of storytelling and story reading on the oral language complexity and story comprehension of young children. *Early Childhood Education Journal*, 32(3), 157–163.

- Johnson, C., & Goswami, U. (2010). Phonological awareness, vocabulary, and reading in deaf children with cochlear implants. *Journal of Speech, Language, and Hearing Research*, 53, 237–261.
- Johnson, A. P. (2012). *A Short guide to action research* (4th ed.). USA: Pearson Education Inc.
- Johnson, A. P. (2016). *10 essential instructional elements for students with reading difficulties: A brain-friendly approach*. Thousand Oaks: Corwin.
- Karasu, G. (2011). *İsitime engelli genclere uygulanan sozcuk dagarcigi gelistirme stratejilerinin incelenmesi*. Unpublished doctoral thesis, Anadolu University, Eskişehir.
- Kelly, L. P. (1996). The interaction of syntactic competence and vocabulary during reading by deaf students. *Journal of Deaf Studies and Deaf Education*, 1, 75–90.
- Kindle, K. J. (2009). Vocabulary development during read-alouds: Primary practices. *The Reading Teacher*, 63(3), 202–211.
- Lane, H. B. & Allen, S. A. (2010). The vocabulary - rich classroom: Modeling sophisticated word use to promote word consciousness and vocabulary growth. *The Reading Teacher*, 63(5), 362–370.
- Kyle, F. E. & Harris, M. (2006). Concurrent correlates and predictors of reading and spelling achievement in deaf and hearing school children. *Journal of Deaf Studies and Deaf Education*, 11(3), 273–288.
- Kyle, F. E. & Harris, M. (2010). Predictors of reading development in deaf children: A 3-year longitudinal study. *Journal of Experimental Child Psychology*, 107, 229–243.
- Luckner, J. L. & Cooke, C. (2010). A summary of the vocabulary resarch with who are deaf or hard of hearing. *American Annals of the Deaf*, Spring, 155(1), 38–67.
- Luckner, J. L., Sebal, A. M., Cooney, J., Young III, J., & Muir, S. G. (2005/2006). An examination of the evidence-based literacy research in deaf education. *American Annals of the Deaf*, 150, 443–456.
- Lwin, S. M. (2016). It's story time!: Exploring the potential of multimodality in oral storytelling to support children's vocabulary learning. *Literacy*, 50(2), 72–82.
- MacGregor, S. K., & Thomas, L. B. (1988). A computer-mediated text system to develop communication skills for hearing-impaired students. *American Annals of the Deaf*, 133(4), 280–284.
- Mason, L. H. (2004). Explicit self-regulated strategy development versus reciprocal questioning: Effects on expository reading comprehension among struggling readers. *Journal of Educational Psychology*, 96(2), 283–296.
- Mayer, C. (2007). What really matters in the early literacy development of deaf children? *Journal of Deaf Studies and Deaf Education*, 12(4), 411–431.
- Mayne, A. M., Yoshinaga-Itano, C., Sedey, A. & Carey, A. (1999). Expressive vocabulary development of infants and toddlers who are deaf or hard of hearing. *Volta Review*, 100(5), 1–28.
- McKeown, M. G. & Beck, I. L. (2004). Direct and rich vocabulary instruction. In J.F. Baumann & E.J. Kame'enui (Eds.), *Vocabulary instruction: Research to practice* (pp. 13–27). New York: Guilford Publishing Company.
- McLeod, A. N. & McDade, H. L. (2011). Preschoolers' incidental learning of novel words during storybook reading. *Communication Disorders Quarterly*, 32(4), 256–266.
- MacNaughton, G. & Hughes, P. (2009). *Doing action research in early childhood studies: A step by step guide*. Maidenhead: Open University Press.
- Messier, J. E. (2015). *Facilitating vocabulary acquisition of children with cochlear implants using electronic storybooks*. Unpublished doctoral thesis, Florida State University, Florida.
- Miller, W. H. (2005). *Improving early literacy: Strategies and activities for struggling students (K-3)*. San Francisco: Jossey-Bass.
- Miller, S. & Pennycuff, L. (2008). The power of story: using storytelling to improve literacy learning. *Journal of Cross-Disciplinary Perspectives in Education*, 1(1), 36–43.
- Milli Egitim Bakanligi [MEB]. (2009). *İlkogretim Turkce dersi ogretim programi ve kilavuzu*. Ankara: MEB, Talim ve Terbiye Kurulu Baskanligi.
- National Reading Panel (NRP). (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, DC: National Institute of Child Health and Human Development.
- Oetting, J. B., Rice M. L., & Swank L. K. (1995). Quick incidental learning (QUIL) of words by school-age children with and without SLI. *Journal of Speech and Hearing Research*, 38, 434–445.
- Paul, V. P., & Gustafson, G. (1991). Hearing impaired students' comprehension of high frequency multi-meaning words. *Remedial and Special Education*, 12, 52–62.
- Paul V. P. (2001). *Language and deafness* (3rd ed.). San Diego, CA: Singular Publishing Group.
- Phillips, D. C. K., Foote, C. J. & Harper, L. J. (2008). Strategies for effective vocabulary instruction. *Reading Improvement*, 45(2), 62–68.
- Pressley, M., Roehrig, A., Bogner, K., Raphael, L., & Dolezal, S. (2002). Balanced literacy instruction. *Focus on Exceptional Children*, 34(5), 1–14.

- Rasinski, T. & Padak, N. (2004). *Effective reading strategies: Teaching children who find reading difficult* (3rd ed.). New Jersey: Pearson Education, Inc.
- Reutzel, D. R. & Cooter, R. B. (1996). *Teaching children to read: From basals to books* (2nd ed.). New Jersey: Merrill/Prentice Hall.
- Reutzel, D. R. & Cooter, R. B. (2007). *Strategies for reading assessment and instruction: Helping every child succeed* (3rd ed.). New Jersey: Pearson Education, Inc.
- Richek, M. A., Caldwell J. S., Jennings, J. H., & Lerner, J. W. (2002). *Reading problems: Assessment and teaching strategies* (4th ed.). Boston: Allyn and Bacon, Inc.
- Roberts, T. & Neal, H. (2004). Relationships among preschool English language learner's oral proficiency in English, instructional experience and literacy development. *Contemporary Educational Psychology*, 29(3), 283-311.
- Rupley, W. H., Blair, T. R. & Nichols, W. D. (2009). Effective reading Instruction for struggling readers: The role of direct/explicit teaching. *Reading & Writing Quarterly*, 25(2-3), 125-138.
- Schirmer, B. R. (2000). *Language and literacy development in children who are deaf*. Boston, MA: Allyn and Bacon Inc.
- Schirmer, B. R. & McGough, S. M. (2005). Teaching reading to children who are deaf: Do the conclusions of the National Reading Panel apply? *Review of Educational Research*, 75(1), 83-117.
- Schirmer, B. R., Schaffer, L., Therrien, W. J. & Schirmer, T. N. (2012). Reread-adapt and answer-comprehend intervention with Deaf and hard of hearing readers: effect on fluency and reading achievement. *American Annals of the Deaf*, 156(5), 469-475.
- Scott, J. & Nagy, W. (2004). Developing word consciousness. In J. Baumann & E. Kaméenui (Eds.), *Vocabulary instruction: Research to practice* (pp. 201-215). New York: Guilford Publishing Company.
- Spencer, L.J., Barker, B. A. & Tomblin, J. B. (2003). Exploring the language and literacy outcomes of pediatric cochlear implant users. *Ear and Hearing*, 24(3), 236-47.
- Tompkins, G. E. (2000). *Teaching writing: Balancing process and product* (3rd ed.). New Jersey: Prentice-Hall.
- Tompkins, G. E. (2014). *Literacy for the 21st century: A balanced approach* (6th ed.). Boston: Pearson Education, Inc.
- Travers, P. (2000). The EXEL Project in a secondary school. M. Lewis & D. Wray (Ed.), *Literacy in the Secondary School* (pp. 101-112). London: David Fulton Publishers.
- Trussell, J. W., & Easterbrooks, S. R. (2014). *The effect of enhanced storybook interaction on signing deaf children's vocabulary*. *Journal Deaf Studies and Deaf Education*, 19(3), 319-332.
- Uzuner, Y. (2007). The impact of strategies used in the balanced literacy approach on story grammar acquisition of three Turkish students with hearing loss: An action study. *Deafness and Education International*, 9(1), 24-44.
- Vacca, R.T., Vacca, J. A. L., Gove, M. K., Burkey, L. C., Lenhart, L. A. & McKeon, C. A. (2003). *Reading and learning to read* (5th ed.). Boston: Allyn and Bacon.
- Williams C (2004). Emergent literacy of deaf children. *Journal of Deaf Studies and Deaf Education*, 9(4), 352-365.
- Williams, C. (2011). Adapted interactive writing instruction with kindergarten children who are deaf or hard of hearing. *American Annals of the Deaf*, 156, 23-34.
- Wolbers, K. A. (2008). Using balanced and interactive writing instruction to improve the higher order and lower order writing skills of deaf students. *Journal of Deaf Studies and Deaf Education*, (13)2, 257-277.
- Wolbers, K. A., Dostal, H. M. & Bowers, L. M. (2012). "I was born full deaf." Written language outcomes after 1 year of strategic and interactive writing instruction. *Journal of Deaf Studies and Deaf Education*, 17(1), 19-38.
- Yalar, T. (2010). İlköğretim 3. sınıflarda Türkçe dersi öğretiminde karşılaşılan sorunların öğretmen görüşlerine göre belirlenmesi. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 15, 30-41.
- Yaman, H. (2009). İlköğretim Türkçe Dersi Programı'nın Kalabalık sınıflarda uygulanabilirliğine ilişkin öğretmen görüşleri. *Kuram ve Uygulamada Eğitim Bilimleri/Educational Sciences: Theory & Practice*, 9(1), 329-359.
- Yin, (2012). *Applications of case study research* (3rd ed.). Los Angeles: Sage Publications.
- Yoshinaga-Itano, C., & Downey, D. M. (1992). When a story is not a story: a process analysis of the written language of hearing-impaired children. *Volta Review*, 95(2), 131-158.